

15W 1752

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant(s): Altman et al.

Group Art Unit: 1752

Serial No.: 10/579,248

Examiner: Unassigned

Filing Date: May 12, 2006

Intl Filing Date: 12 November 2004

Docket No.: 235.00550101

Title: BIOTIN-FACILITATED TRANSPORT IN GRAM NEGATIVE BACTERIA

**Mail Stop Amendment**

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

We are transmitting the following documents along with this Transmittal Sheet (which is submitted in triplicate):

- ☒ **Small entity status is entitled to be asserted in the above-identified application.**
- ☒ **An itemized return postcard.**
- ☐ A Petition for Extension of Time for \_\_ month(s). Please charge Deposit Account No. 13-4895 in the amount of \$\_\_ for the required fee.
- ☒ **An Information Disclosure Statement (2 pgs), 1449 forms (3 pgs); and copies of 27 documents cited on the 1449 forms.**
- ☐ An Appeal Brief. Please charge Deposit Account No. 13-4895 in the amount of \$\_\_, for the required Appeal Brief filing fee.
- ☐ A check in the amount of \$\_\_, representing \_\_\_\_.
- ☐ Other: \_\_\_\_.
- ☐ Amendment ☐ No Additional fee is required. ☐ The fee has been calculated as shown:

Fee Calculation for Claims Pending After Amendment					
	Pending Claims after Amendment (1)	Claims Paid for Earlier (2)	Number of Additional Claims (1-2)	Cost per Additional Claim	Additional Fees Required
Total Claims				x \$25 =	
Independent Claims				x \$100 =	
One or More New Multiple Dependent Claims Presented? If Yes, Add \$180 Here →					
Total Additional Claim Fees Required					

**CERTIFICATE UNDER 37 C.F.R. §1.8:** The undersigned hereby certifies that this Transmittal Letter and the paper(s), as described hereinabove, are being deposited in the United States Postal Service, as first class mail, in an envelope addressed to: **Mail Stop Amendment**, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 10<sup>th</sup> day of July, 2007.

MUETING, RAASCH & GEBHARDT, P.A.

Customer Number: 26813

By: Victoria A. Sandberg

Name: Victoria A. Sandberg

Reg. No.: 41,287

Direct Dial: 612-305-1226

Facsimile: 612-305-1228

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.D./



PATENT  
Docket No. 235.0055 0101

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s):	ALTMAN et al.	)	Group Art Unit:	1752
		)		
Serial No.:	10/579,248	)	Examiner:	Unassigned
		)		
Filed:	12 May 2006	)	Confirmation No.:	7812
		)		
For:	<u>BIOTIN-FACILITATED TRANSPORT IN GRAM NEGATIVE BACTERIA</u>			

**SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT**

**Mail Stop Amendment**  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In compliance with the duty imposed by 37 C.F.R. § 1.56, and in accordance with C.F.R. §§ 1.97 *et. seq.*, the materials enclosed herewith are brought to the attention of the Examiner as possibly being of interest in connection with the above-identified patent application. Pursuant to MPEP § 609, the information cited in the present Information Disclosure Statement shall not be construed to be an admission that the information is, or is considered to be, material to patentability. Consideration of each of the documents listed on the attached 1449 form(s) is respectfully requested. Pursuant to the provisions of M.P.E.P. §609, Applicants further request that a copy of the 1449 form, marked as being considered and initialed by the Examiner, be returned with the next Official Communication.

This application is a National Stage Entry of PCT/US2004/037896, filed on 12 November 2004 and Applicants wish to bring to the Examiner's attention to the corresponding International Search Report and to the International Preliminary Report on Patentability, submitted herewith.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.D./

**Information Disclosure Statement**

Page 2 of 2

Applicant(s): ALTMAN et al.

Serial No.: 10/579,248

Confirmation No.: 7812

Filed: 12 May 2006

For: BIOTIN-FACILITATED TRANSPORT IN GRAM NEGATIVE BACTERIA

It is believed that no fee is due, as this Information Disclosure Statement is filed prior to the receipt of any Action on the merits. However, in the event a fee is due, please charge any fee or credit any overpayment to Account No. 13-4895.

The Examiner is invited to contact Applicants' Representatives at the below-listed telephone number, if they can be of any assistance during prosecution of the present application.

**CERTIFICATE UNDER 37 C.F.R. 1.8:**

The undersigned hereby certifies that this paper is being deposited in the United States Postal Service, as first class mail, in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 10<sup>th</sup> day of July, 2007.

By: 

Name: VICTORIA A SANDBERG

July 10, 2007  
Date

Respectfully submitted

By

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<b>INFORMATION DISCLOSURE STATEMENT</b> 	Atty. Docket No.:235.00550101	Serial No.: 10/579,248
	Applicant(s): Altman et al.	Confirmation No.: 7812
	Application Filing Date: 12 May 2006	Group: 1752
	Information Disclosure Statement mailed: July 10, 2007	

## U.S. PATENT DOCUMENTS

Examiner Initial	Copy Enclosed	Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
		7,033,594	04/25/06	Low et al.			

## FOREIGN PATENT DOCUMENTS

Examiner Initial	Copy Enclosed	Document Number	Date	Country	Class	Subclass	Translation	
							Yes	No
	X	DE 100 55 789 A1	06/06/02	Germany				X
	X	WO 02/40511 A2	03/25/02	WIPO (English abstract)				X
	X	WO 02/40511 A3	03/25/02	WIPO (English abstract)				X

## OTHER DOCUMENTS (Including Authors, Title, Date, Pertinent Papers, etc.)

Examiner Initial	Copy Enclosed	Document Description
	X	American Type Culture Collection, "ATTC Number 9721," organism: <i>Pseudomonas aeruginosa</i> Migula; designation: NRS 112 [online]; Manassas, VA [retrieved on 2007-02-23]. Retrieved from the Internet: < <a href="http://www.atcc.org/common/catalog/numSearch/numResults.cfm?atccNum=9721&amp;CFID=10430581&amp;CFTOKEN=76dd390cc23da4a9-DB0128C2-92C7-CF98-64C2BC85A22D7B2D">http://www.atcc.org/common/catalog/numSearch/numResults.cfm?atccNum=9721&amp;CFID=10430581&amp;CFTOKEN=76dd390cc23da4a9-DB0128C2-92C7-CF98-64C2BC85A22D7B2D</a> >; 2 pgs.
	X	American Type Culture Collection, "ATTC Number 25923," organism: <i>Staphylococcus aureus</i> Rosenbach; designation: Seattle 1945 [online]; Manassas, VA [retrieved on 2007-02-23]. Retrieved from the Internet: < <a href="http://www.atcc.org/common/catalog/numSearch/numResults.cfm?atccNum=25923&amp;CFID=10430581&amp;CFTOKEN=76dd390cc23da4a9-DB0128C2-92C7-CF98-64C2BC85A22D7B2D">http://www.atcc.org/common/catalog/numSearch/numResults.cfm?atccNum=25923&amp;CFID=10430581&amp;CFTOKEN=76dd390cc23da4a9-DB0128C2-92C7-CF98-64C2BC85A22D7B2D</a> >; 4 pgs.
	X	Fickel et al., "Transport of impermeant substances in <i>E. coli</i> by way of oligopeptide permease," <i>Nat. New Biol.</i> , 1973;241:161-163.
	X	Hussey et al., "Efficient Delivery of Streptavidin to Mammalian Cells: Clathrin-Mediated Endocytosis Regulated by a Synthetic Ligand," <i>J. Am. Chem. Soc.</i> , 2002; 124:6265-6273;S1-S8.

EXAMINER /Patricia Duffy/	Date Considered 05/28/2008
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\*Examiner: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.D./

<b>INFORMATION DISCLOSURE STATEMENT</b>	<b>Atty. Docket No.:</b> 235.00550101	<b>Serial No.:</b> 10/579,248
	<b>Applicant(s):</b> Altman et al.	<b>Confirmation No.:</b> 7812
	<b>Application Filing Date:</b> 12 May 2006	<b>Group:</b> 1752
	Information Disclosure Statement mailed: July 10, 2007	

Examiner Initial	Copy Enclosed	Document Description
	X	Miller, <i>Experiments in Molecular Genetics</i> , Cold Spring Harbor Laboratory Press, Cold Spring Harbor, NY (1972).
	X	Miller et al., "The design, synthesis and study of siderophore-antibiotic conjugates," <i>Biol. Met.</i> , 1991; 4:62-69.
	X	Morley et al., "Backbone-modified analogues of small peptides: transport and antibacterial activity," <i>Biochem. Soc. Trans.</i> , 1983; 11:798-800.
	X	Payne, "Peptides and micro-organisms," <i>Adv. Microb. Physiol.</i> , 1976; 13:55-113.
	X	Payne, "Transport and utilization of peptides by bacteria," in <i>Microorganisms and Nitrogen Sources</i> , 1980; Title page, publication page and pages 211-256.
	X	Payne et al., "Peptide transport by micro-organisms," <i>Adv. Microb. Physiol.</i> , 1994; 36:1-80.
	X	Piffeteau et al., "Biotin transport by a biotin-deficient strain of <i>Escherichia coli</i> ," <i>Biochim. Biophys. Acta</i> , 1982; 688:29-36.
	X	Piffeteau et al., "Biotin uptake: influx, efflux, and countertransport in <i>Escherichia coli</i> ," <i>Biochim. Biophys. Acta</i> , 1985; 816:77-82.
	X	Prakash et al., "Active transport of biotin in <i>Escherichia coli</i> K-12," <i>J. Bacteriol.</i> , 1974; 120(2):785-791.
	X	Press et al., "A comparative evaluation of conventional and pretargeted radioimmunotherapy of CD20-expressing lymphoma xenografts," <i>Blood</i> , 2001; 98:2535-2543.
	X	Schägger et al., "Tricine-sodium dodecyl sulfate-polyacrylamide gel electrophoresis for the separation of proteins in the range from 1-100 kDa," <i>Anal. Biochem.</i> , 1987; 166:368-379.
	X	Scherrer et al., "Molecular sieving by the <i>Bacillus megaterium</i> cell wall and protoplast," <i>J. Bacteriol.</i> , 1971; 107:718-735.
	X	Song et al., "Enhanced neuroprotective effects fibroblast growth factor in regional brain ischemia after conjugation to a blood-brain delivery vector," <i>J. Pharmacol. Exp. Ther.</i> , 2002;301(2):605-610.
	X	Staskawicz et al., "Phaseolotoxin transport in <i>Escherichia coli</i> and <i>Salmonella typhimurium</i> via the oligopeptide permease," <i>J. Bacteriol.</i> , 1980; 142:474-479.

<b>EXAMINER</b>  /Patricia Duffy/	<b>Date Considered</b>  05/28/2008
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	<b>Application Filing Date:</b> 12 May 2006	<b>Group:</b> 1752
	Information Disclosure Statement mailed: July 10, 2007	

Examiner Initial	Copy Enclosed	Document Description
	X	Walker, Jennifer Renee, "Improving the Stability of Bioactive Peptides Using Protein-Based Motifs," Ph.D. Dissertation, University of Georgia Department of Microbiology. Cover date: December 2002. Publically available 23 October 2003
	X	Walker et al., "Using protein-based motifs to stabilize peptides," <i>J. Peptide Research</i> , 2003; 62:214-226.
	X	Walker et al., "Biotinylation facilitates the uptake of large peptides by Escherichia coli and other Gram-negative bacteria," <i>Applied and Environmental Microbiology</i> , 2005; 71(4):1850-1855.
	X	Wittmann et al., "New synthetic siderophores and their $\beta$ -lactam conjugates based on diamino acids and dipeptides," <i>Bioorg. Med. Chem.</i> , 2002; 10:1659-1670.
	X	Copy of International Search Report and the Written Opinion of the International Searching Authority, dated July 3, 2006. 22 pages.
	X	Copy of International Preliminary Report on Patentability, dated August 24, 2006. 13 pages.

<b>EXAMINER</b> /Patricia Duffy/	<b>Date Considered</b> 05/28/2008
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